

Attachment A: Scope of Work

PERFORMANCE REQUIREMENTS

A. General System Description

1. The hose line fire trainer shall be designed to provide hot, challenging multi-stage fires to train both new recruits and seasoned firefighters. The fire trainer shall be completely portable, capable of being setup and operated by one person. The fire trainer shall consist of a water-cooled, constant-flame-pilot system, designed to ignite one, or more, water-bath fire-pans, by a tethered control pendant. The flame-pilot enclosure and the fire pan shall be constructed of stainless steel and be designed to simulate the following mockup structures:
 - a. Pressure Vessel Mockup

B. Trainer Operation

1. The system shall operate as follows:
 - a. Using the control pendant, the operator shall turn ON the "Constant Flame Pilot"
 - b. After visually verifying that a constant flame pilot is present, the operator shall press and hold the vapor and/or liquid flame buttons to create a single or dual stage flame effect.
 - c. The vapor fire button and the liquid flame button must remain depressed throughout the training exercise. Release of the button at any time shall cause the vapor and /or fire(s) to extinguish.
 - d. Fire extinguishment shall be controlled by turning off each burner as the trainees apply proper extinguishment techniques.
 - e. Once the training area is extinguished, the pilot shall be turned off.

SUBMITTALS

- A. The prospective fire training system supplier shall be responsible for providing three (3) copies of an operator and maintenance manual. The operation and maintenance manual shall include detailed information on the operation of the training systems, including start-up, training, and shut down of the system. The manual shall also include information regarding routine maintenance of the system and shall provide a list of part numbers and manufactures of all user replaceable parts.

PRICING

- A. Pricing submitted by qualified suppliers is to include shipping of all items specified here within to Indianapolis, IN. The supplier will also be responsible for conducting an eight (8) hour operation and maintenance course four up to twelve (12) of the Owner's staff or designee at no additional charge to the Owner. The course shall cover setup and breakdown of all training props, and peripheral equipment, as well as their operation and maintenance.

PRODUCTS

HOSE LINE FIRE TRAINER

- A. The hose line fire trainer shall provide training in the safe approach, cooling, and extinguishment of simulated class A, B, or C type fire situations. The fire trainer shall consist of the following main components described in this section:
1. Pilot Box with Pendant
 - o Flame Pilot Module (quantity 4)
 - o Fire Pan (quantity 2)
 - o Control Pendant (quantity 4)
 2. Prop Structures:
 - o Car Prop with Integral Burners (quantity 2)
 - o Pressure Vessel Mockup (quantity 2)
 - o Christmas Tree Mockup (quantity 2)

The fire shall burn until the operator commands the fire to cease in response to correct trainee extinguishment techniques.

FLAME PILOT MODULE

- A. The flame pilot module shall be designed to be mobile with removable wheels for ease of transport. The pilot module housing shall be constructed of stainless steel and water-cooled. The flame pilot module shall be designed to house:
- a flame-pilot electronic-ignition system
 - a burner control system consisting of:
 - o a vapor gas train with inlet and outlet connection points for standard, hand-tight acme fittings
 - o a liquid gas train with inlet and outlet connection points for standard, hand-tight acme fittings

The flame pilot shall not be extinguished by agent application. The flame pilot shall be instructor controlled.

FIRE PAN

- A. The fire pan shall be designed to be an integral part of multiple prop structures. The fire pan shall be designed to be mobile with removable wheels for ease of transport. The pan shall have minimal dimensions of 4 ft by 6ft (1.2m by 1.8m) and shall be constructed of stainless steel. The pan shall contain standard inlet (hand-tight type), acme fittings. The pan shall be provided with both propane vapor and liquid burners, each constructed of stainless steel. The burners shall be designed to produce flames consistent with the represented fire. The pan shall be filled with water during training and easily drained during shutdown and disassembly.

CONTROL PENDANT

- A. The control pendant shall be tethered and designed to be removable. The training fires shall be controlled through the instructors control pendant. The control pendant shall provide for full control of the flame pilot, the two-stage fire, and dead-man capability. The deadman safety feature, when enabled shall immediately turn off the fire.

CAR PROP WITH INTEGRAL BURNERS

- A. The Car Fire Prop shall be designed to replicate a mid-size vehicle and include operating hood, operating passenger and driver doors, operating trunk, driver and passenger seat mockups, and steering wheel mockup. The car shall have minimal dimensions of 12.5'L x 5'W x 4.5'H and incorporate integrated stainless steel burners to replicate the following fire scenarios: engine fire, forward passenger area fire, and rear passenger area fire. The fires shall be selectable prior to training commencement.
- B. The car mockup shall include a stainless steel sub-frame assembly that is water cooled to extend the life of the mock-up. A 1 1/2" FD connection shall be provided on the rear end of the mockup for cooling water. The design shall allow for insertion of the flame pilot module in the rear of the mockup during training. High flame (fully involved fire) shall use a combination of vapor and liquid propane with a minimum output of 60,000,000 btu/hr.

PRESSURE VESSEL

- A. The pressure vessel fire shall be designed to train response personnel in dealing with propane storage tank fire emergencies. It shall demonstrate the effects of an impinging flame on a 250-gallon storage tank and the effect of a relief valve fire. The prop shall enable instructors to teach recognition of a relief valve activation and how to appropriately cool a tank, how to approach an impinging fire and how to shut down fuel flow from a tank.
- B. The pressure vessel shall represent a 250-gallon propane tank mock up and be designed to withstand the heat of the fire and the application of extinguishing agent. The propane tank shall be capable of being filled with water with minimal dimensions of 8.4ft L x 28" dia. x 4ft H (2.6m x 0.7m x 1.2m) and include the following features:
 - Relief valve blow-off fire effect
 - Standard hinged dome
 - Tank lifting handles and lugs
 - Raised support legs

CHRISTMAS TREE MOCKUP

- A. The Christmas Tree Mockup shall function as a burner, and shall be generally tree-shaped, with branches. It shall be constructed as a pipe manifold with a sufficient number of holes throughout to evenly distribute propane liquid in and around the structure so that the ignited propane produces an intense ball of flame engulfing the structure. The structure shall be made of materials that shall withstand the heat of the fire and the application of extinguishing agent.

TRAINER OPERATION

The system shall operate as follows:

- Using the control pendant, the operator shall turn ON the "Constant Flame Pilot"
- After visually verifying that a constant flame pilot is present, the operator shall press and hold the vapor and/or liquid flame buttons to create a single or dual stage flame effect.
- The vapor fire button and the liquid flame button must remain depressed throughout the training exercise. Release of the button at any time shall cause the vapor and /or fire(s) to extinguish.
- Fire extinguishment shall be controlled by turning off each burner as the trainees apply proper extinguishment techniques.
- Once the training area is extinguished, the pilot shall be turned off.

9. WARRANTY

- A. Pricing provided shall include a 2-year warranty for all live fire training systems that warrants the system to be free from defects in material and workmanship for a period of two (2) years after

the final system acceptance date. Supplier shall provide a replacement part for any part that fails in normal use during this warranty period. The supplier shall provide a toll free customer service telephone number that can be used by the Owner 24 hours per day, 7 days per week to contact the supplier's customer service department. The supplier shall also provide a web-based system for use by the client in requesting and tracking service.

10. **Delivery**

The manufacturer shall provide all of the listed equipment and conduct the orientation training within 90 days of the order being received.

APPENDIX A Statement of Work

A-1 Fire Training Equipment Supplier Responsibilities:

1. Manufacture and ship the hose line fire trainer defined in this document.
2. Provide three (3) copies of an Operator and Maintenance Manual to the Owner.
3. Provide a quantity the following:
 - a. Propane liquid and vapor supply hoses with adapters.
Min. Length = 50 ft (15m).
 - b. Propane liquid and vapor distribution hoses with adapters.
Min. Length = 10 ft (3m).
 - c. Heavy-duty 120 VAC power cable.
Min. length = 50 ft (15m).
 - d. Hose and cable guard cover.
4. Provide an umbilical-cord assembly. Min. 30 ft (9m).
5. Provide a two-year warranty on parts and defects in workmanship.
6. Provide a mockup structure of a:
 - a. Car with Integral Burners
 - b. Pressure Vessel Mockup
 - c. Christmas Tree Mockup

Does your bid comply with this requirement?

Yes () No ()

A-2 Owner Responsibilities:

1. Provide propane tank fill in time for operation and maintenance training
2. Provide suitable fire training area and water supply for firefighting and cooling water

APPENDIX B QUALIFICATIONS EVIDENCE

Firms that wish to become qualified to furnish the Fire Training Systems must complete and submit the tables in this section as a mandatory component of their request to become a qualified supplier. Submittal of these tables alone will not be sufficient to become a qualified supplier. The prospective Fire Training Systems supplier must provide all information required by Section 1.0 of the Fire Training System specification.

Table	Title	Comment
1	Corporate Qualifications	Narrative
2	Outdoor Live Fire Training Systems- Complying Site Information	10 Sites Required
3	Outdoor Live Fire Training Systems- Specification Compliance Matrix	Table 2
4	Post Purchase Support Capabilities	Narrative
5	Product Technical Information	Narrative
6	NRTL Certification	Narrative

Completion of Table 2 requires the applicant to include reference to the sites listed in Table 1 by site number that comply with the specification.

TABLE 1
HOSE LINE FIRE TRAINER
COMPLYING SITE NO. ____ INFORMATION
(10 Sites Required)

Owner's Name:		
Site Address:		
Owner's Contact Name:		
Owner's Telephone:		
Prime Contractor or Subcontractor?:		
Contract Award Date:		
Trainer Acceptance Date:		
Fire Trainer Description of Equal or Greater Complexity:		
Responsibilities:		

**TABLE 2
OUTDOOR LIVE FIRE TRAINING SYSTEMS
SPECIFICATION COMPLIANCE MATRIX**

SPECIFICATION SECTION / PARA. NO.	SPECIFICATION PARAGRAPH TITLE	COMPLIANCE STATEMENT	COMPLYING SITE NUMBERS
1.02	Introduction		
1.03	Qualification Procedure		
1.03.B	Company Capabilities		
1.03.C	Equipment Certification		
1.03.D	Additional Information		
1.04.A	General System Description		
1.04.B	Trainer Operation		
1.05	Submittals		
1.06	Pricing		
2.01	Hose Line Fire Trainer		
2.02	Flame Pilot Module		
2.03	Fire Pan		
2.04	Control Pendant		
	Prop Structure(s)		
2.05	Car Prop with Integral Burners		
2.06	Pressure Vessel Mockup		
2.07	Christmas Tree Mockup		
2.08	Trainer Operation		
2.09	Warranty		

END OF SECTION